

Remarks

The Official Action rejected claims 1-34. Applicants amended claims 1, 3, 4, 8, 10, 12-14 and canceled claims 11 and 15. Claims 1-10, 12-14 and 16-34 remain pending.

Claim Rejection under 35 USC 102 (Bealkowski)

The Official Action rejected claims 1-34 under 35 USC 102(e) as being anticipated by Bealkowski et al. (US Patent 6,282,596). Claims 1, 3, 4, 8, 10, 12-14 are amended and claims 11 and 15 are canceled. Applicants respectfully request allowance of claims 1-10, 12-14 and 16-34 for the reasons presented below.

As is well-established, in order to successfully assert a *prima facie* case of anticipation, the Official Action must provide a single prior art document that includes every element and limitation of the claim or claims being rejected. Therefore, if even one element or limitation is missing from the cited document, the Official Action has not succeeded in making a *prima facie* case.

Claims 1-4

Claim 1, as amended, requires enabling **a communication interface of the hot plug module** to establish a communication link with a running computer system. Bealkowski appears to teach a hot-pluggable system bus for processor cards 11a-11d. However, the processor cards 11a-11d appear to have no communication interface, or at least Bealkowski appears to provide no teaching regarding enabling a communication interface of the processor cards 11a-11d. Bealkowski discloses FET switches 82, 86 to control power supplied to the processor cards 11a-11d. Bealkowski further discloses a

clock buffer to control application of clock signals to the processor cards 11a-11d.

Moreover, Bealkowski discloses a FETs 80 that provide front-side isolation to maintain electrical integrity during hot-plug. However, as clearly depicted in Bealkowski FIG. 3, the FETs 80, 82, 86 and the clock buffer are all on the computer system side of the CPU connectors 14 and is not part of the processor cards 11a-11d. Bealkowski appears to disclose only providing isolation on the computer system side of the connectors 14. However, claim 1 provides isolation at the hot plug module by requiring a communication interface of the hit plug module be enabled to establish a communication link with the running system.

Since Bealkowski does not teach enabling a communication interface of a hot plug module, Bealkowski does not anticipate claim 1. Applicants respectfully request the rejection of claim 1 be withdrawn.

Each of claims 2-7 depends from claim 1. Accordingly, each of claims 2-7 is allowable for at least the reasons stated above in regard to claim 1. Further, each of claims 2-7 includes additional novel and nonobvious limitations. For example, claim 6 requires adding one or more **memory caching input/output hubs** of a hot plug module to an input/output pool of a running computer. While Bealkowski may teach hot-pluggable processor cards, Applicants have been unable to locate in Bealkowski a teaching of **memory caching** input/output hubs, let alone, a teaching that such input/output hubs are caching agents of a hot plug module.

Furthermore, claim 7 requires adding identified **memory** of the hot plug module to a memory pool of the running computer system. Again, Bealkowski appears to teach hot-pluggable processor cards. However, the hot-pluggable processor cards do not appear to have any memory. Bealkowski merely indicates that the processors of the

processor cards have cache memories. Such cache memories do not increase the storage capacity of the running computer device, but only provide a mechanism for the processors to retain local copies of data stored in the memory 32 of the computer system. As a result, such cache memories are not added to a memory pool of the running computer when the processor card is added to the running computer system.

Bealkowski does not anticipate the invention of claims 1-7 since it does not teach each and every limitation of such claims. Applicants respectfully request the rejection of claims 1-7 be withdrawn. If the Examiner elects to maintain the present rejection, the Applicants respectfully request the Examiner identify with specificity (e.g. column and line number) where Bealkowski teaches enabling a communications interface of a hot plug module (claim 1), a hot plug module having memory caching input/output hubs (claim 6), adding memory of a hot plug module to a memory pool of a running computer system (claim 7).

Claims 8-10

Claim 8 requires adding identified **memory** of a hot plug module to a memory pool of the running computer system. As stated above, Bealkowski appears to merely teach that the processors of the processor cards have cache memories. Bealkowski appears to provide no teaching in regard to a hot plug module with memory to be added to a memory pool of a running computer system. Since Bealkowski does not teach each and every limitation of claim 8, Bealkowski does not anticipate claim 8.

Each of claims 9-10 depends from claim 8. Accordingly, each of claims 9-10 is allowable for at least the reasons stated above in regard to claim 8. Further, each of claims 9-10 includes additional novel and nonobvious limitations. For example, claim 10 requires enabling a communication interface of the hot plug module. Bealkowski

appears to merely activate switches on the computer system side of a connector, and appears to provide no teaching in regard to enabling a communication interface of the hot plug module. Applicants respectfully request that the present rejection of claims 8-10 be withdrawn.

Claims 12-14

Claim 14, rewritten in independent form, requires waiting **a predetermined time** for pending transactions associated with hot plug module to complete before **disabling** a communication interface. Bealkowski however does not appear to wait a predetermined time. According to column 9, lines 9-32, the Bealkowski service processor requests the system to quiesce all the processors and waits until the chipset indicates all processors are halted before **enabling** the FET switch associated with the added processor card. There is no indication that the time needed by the system to halt its processors is fixed or predetermined. In fact, it is very likely the time needed to halt the processor will vary. As a result, Bealkowski does not anticipate claim 14 since Bealkowski does not teach each and every limitation of claim 14. Further, each of claims 12-13 depends from claim 14. Accordingly, each of claims 12-13 is allowable for at least the reasons stated above in regard to claim 14. Applicants respectfully request that the present rejection of claims 12-14 be withdrawn.

Claim 16-23

Claim 16 requires examining **a plurality of interface control registers** in response to a hot plug event. Bealkowski appears to disclose several ways to indicate that a processor subsystem has been installed. However, Applicants have been unable

to locate any teaching in regard to examining a plurality of interface control registers as required by Applicants' claim 1. Accordingly, Bealkowski does not anticipate claim 16.

Each of claims 17-23 depend from claim 16. Accordingly, each of claims 17-23 is allowable for at least the reasons stated above in regard to claim 16. Further, each of claims 17-23 includes additional novel and nonobvious limitations. For example, claim 17 requires determining whether hot plug addition or hot plug removal has been requested ***based upon an interface control register*** associated with the hot plug module. While Bealkowski discloses hot plug addition and hot plug removal of processors, Bealkowski appears to provide no teaching in regard to determining whether a hot plug addition or a hot plug removal has been requested based upon an interface control register as required by the invention of Applicants' claim 17. Similarly, Bealkowski appears to provide no teaching in regard to making the determinations of claims 18 and 22 based upon an interface control register. Furthermore, Bealkowski appears to provide no teaching in regard to determining ***that no other hot plug addition is in progress*** as required by claim 23.

If the Examiner elects to maintain the present rejection of claims 16-23, Applicants respectfully request that the Examiner indicate with specificity where Bealkowski teaches each of the limitations of claims 16-23 and in particular the limitations mentioned above. Applicants respectfully request the rejection of claims 16-23 be withdrawn.

Claims 24-27

Claim 24 requires a hot plug module having a communications interface to establish a communication link with a running computing device in response to being enabled and to de-establish the communication link in response to being disabled. As

stated above in regard to claim 1, Bealkowski does not teach a hot plug module that has a communications interface that can be enabled and disabled. Instead, Bealkowski has switches on the computer system side of a connector to isolate the hot plug module during addition and removal. Furthermore, Bealkowski does not disclose a hot plug module with an interface control register to indicate whether the communication interface is enabled or disabled. Instead, Bealkowski discloses a hot plug control that is on the computer system side of the connector to control FET switches used to isolate the hot plug processor cards.

Each of claims 25-27 depends from claim 24. Accordingly, each of claims 25-27 is allowable for at least the reasons stated above in regard to claim 24. Further, each of claims 25-27 includes additional novel and nonobvious limitations. For example, claim 27 requires that a processor of the hot plug module enable the communication interface of the hot plug module. Bealkowski, however, appears to rely on the hot plug control on the computer system side of the connector to active switches on the computer system side of the connector. There appears to be no teaching of a processor of a hot plug module enabling a communication interface of the hot plug module.

If the Examiner elects to maintain the present rejection of claims 24-27, Applicants respectfully request that the Examiner indicate with specificity where Bealkowski teaches each of the limitations of claims 24-27 and in particular the limitations mentioned above. Applicants respectfully request the rejection of claims 24-27 be withdrawn.

Claims 28-30

Claim 28 requires a midplane having a hot plug interface and a hot plug module to update the state of the hot plug interface of the midplane to indicate when the

resources are ready to join the computing device. Bealkowski does not teach a hot plug module that updates a hot plug interface of a midplane as required by claim 28. As stated above, Bealkowski merely indicates that a service processor and/or a hot plug control of the computer system side of the connector manage FET switches that isolate a processor card during addition and removal. There appears to be no teaching of the processor card updating a hot plug interface on the computer system side of the connector. Since Bealkowski does not teach each and every limitation, Bealkowski does not anticipate claim 28.

Each of claims 29-30 depends from claim 28. Accordingly, each of claims 29-30 is allowable for at least the reasons stated above in regard to claim 28. Further, each of claims 29-30 includes additional novel and nonobvious limitations. For example, claim 30 requires that a hot plug interface detect whether framing packets are received from the hot plug interface. Applicants have reviewed Bealkowski in detail and are unable to locate any teaching of "framing packets". If the Examiner elects to maintain the present rejection of claims 28-30, Applicants respectfully request that the Examiner indicate with specificity where Bealkowski teaches each of the limitations of claims 28-30 and in particular the framing packet limitations of claim 30. Applicants respectfully request the rejection of claims 29-30 be withdrawn.

Claims 31-34

Claim 31 requires a midplane having **a switch that comprises a plurality of interface control registers**. While Bealkowski teaches FET switches, Bealkowski appears to provide no teaching in regard to a switch that has a plurality of interface control registers. Bealkowski therefore does not anticipate the invention of claim 31. Each of claims 32-34 depends from claim 31. Accordingly, each of claims 32-34 is

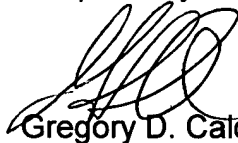
allowable for at least the reasons stated above in regard to claim 28. If the Examiner elects to maintain the present rejection of claims 31-34, Applicants respectfully request that the Examiner indicate with specificity where Bealkowski teaches a switch that comprises a plurality of interface control registers. Applicants respectfully request the rejection of claims 31-34 be withdrawn.

Conclusion

The foregoing is submitted as a full and complete response to the Official Action. Applicants submit that the pending claims are in condition for allowance. Reconsideration is requested, and allowance of the now pending claims is earnestly solicited.

Should it be determined that an additional fee is due under 37 CFR §§1.16 or 1.17, or any excess fee has been received, please charge that fee or credit the amount of overcharge to deposit account #02-2666. If the Examiner believes that there are any informalities which can be corrected by an Examiner's amendment, a telephone call to the undersigned at (503) 439-8778 is respectfully solicited.

Respectfully submitted,



Gregory D. Caldwell
Reg. No. 39,926

c/o Blakely, Sokoloff, Taylor & Zafman LLP
12400 Wilshire Blvd.
Seventh Floor
Los Angeles, CA 90025-1030
408-720-8300